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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

USDA SEEKS PUBLIC COMMENTS ON PROPOSED RULE CHANGES

The public has until October 23, 1995 to comment on a USDA/Animal and Plant Health Inspection Service (APHIS) proposal to amend the biotechnology regulations. The amendments would allow most genetically modified plants now regulated to be introduced into the environment under the notification process, thereby reducing considerably the amount of paperwork and the turnaround time now needed to process permit applications for field tests. The notification process still requires that certain criteria and standards be met. The petition process, on the other hand, would be simplified and made more flexible to allow USDA scientists to extend nonregulated status to other crops that closely resemble those already determined to be nonregulated.

According to John Payne, acting director for APHIS' biotechnology, biologics and environmental protection staff, "The effect of the proposed amendments would be to simplify procedures, expedite review, and reduce reporting procedures while maintaining adequate oversight to ensure environmental safety." The proposal was published in the August 22 *Federal Register*. For more details, please call Michael Schechtman at APHIS at 301-734-7601.

USDA CALLS FOR RISK ASSESSMENT PROPOSALS

USDA is looking for proposals to fund in the field of biotechnology risk assessment research. Although emphasis will be on research involving genetically modified plants, animals and microbes, model systems using non-modified organisms will also be considered if such systems provide information that could lead to improved assessments. Up to \$1.7 million is available. (See the next article to understand how risk assessment research funds are used.) The cutoff date for proposals is December 11, 1995. To request an application kit, please call 202-401-5048. For more information, call Edward Kaleikau at 202-401-1901 or Robert Faust at 301-504-6918, or see the September 11 *Federal Register*, page 47236.

A MATTER OF ASSESSING RISK

Do viral genes in genetically engineered oats interact with other viruses that infect oats, creating new viruses? This is a major question for scientist W. Allen Miller, an associate professor of plant pathology at Iowa State University, who is using funds from USDA's Biotechnology Risk Assessment Program to study the environmental risks of crops genetically engineered to resist viruses. Miller and Michael Lee, an associate professor of agronomy, as well as collaborators at the University of Minnesota are looking at how viruses might recombine and reproduce within plants and whether cross pollination could pass virus resistance on to wild oats. Miller is using oats modified to resist barley yellow dwarf virus, one of the world's most destructive diseases which attacks oats, wheat and other small grains. If the research concludes there are no environmental threats, then resources available to oat breeders would be expanded.

NEWS AROUND THE NATION (AND THE WORLD)

ON THE BIOMEDICAL FRONT

There are 234 biotechnology drugs now in clinical trials with cancer as the disease most targeted by the products, according to a 1995 survey conducted by the Pharmaceutical Research Manufacturers of America and as reported in the August issue of *Genetic Engineering News*. Twenty-four biotech products have been approved by the Food and Drug Administration (FDA). Besides cancer, drugs are being tested to treat AIDS, asthma, diabetes, heart disease, and many other diseases. Most of the research uses monoclonal antibodies. Biotech vaccines are being developed to prevent infectious diseases. The use of gene therapy has broadened to include non-inherited diseases such as AIDS and cancer.

BIOTECHNOLOGY IN NEW ZEALAND

Transgenic white clovers, sheep genome mapping, and genetically modified embryos are just a few of the research areas being pursued by New Zealand's Pastoral Agriculture Research Institute and as reported in the first issue of *Global Perspectives*, a Canadian publication.

Using biotechnology methods, transgenic white clover has been made more resistant to viral diseases and insects. The sheep genome project has identified and located those genes responsible for increased fertility. Improvements in genetically modifying embryos,

sperm sexing, and other technologies allow beneficial animal genes to be incorporated faster into herds. To learn more about the Institute, please call 64-07-834-6623; Fax: 64-07-834-6640.

BOUNTIFUL BIOTECH CROPS

Several hundred visitors attended the annual 2-day "Celebration of America's Bounty", Sept. 16-17 at the Claude Moore Colonial Farm in McLean, VA. This year's event featured a 3,000 square meter field plot with genetically engineered crops. Included were Bt cotton and tomato, transgenic corn, virus-resistant tomatoes and squash, and transgenic soybeans. Rows of unmodified crops were placed alongside the transgenic varieties so the public could draw comparisons. Monsanto Co., St. Louis, MO, organized the display to inform and educate local citizenry who may be unfamiliar with the changes taking place in American agriculture.

IT'S CHEAPER THAN A PLANE TICKET

Want to know what's going on in Australia's biotechnology community? Try tuning in to the new Web page managed by Australia's Biotechnology Association and read the contents of the New Zealand Biotechnology Directory and the *Australasian Biotechnology*, a bimonthly journal. Also learn about biotechnology with the full text of an educational leaflet series. The Web page's address is <http://www.aba.asn.au>

GLOBAL AGBIOTECH ASSOCIATION FORMED

The Global Agricultural Biotechnology Association (GABA) was formed in Saskatoon, Canada, in 1994 with the mission to "facilitate the advancement of agbiotechnology through international information exchange and strategic communications."

GABA relies on various forms of telecommunications to link up researchers and policymakers from around the world. It also strives to help the public gain a better understanding of agricultural biotechnology. For more information, please call 306-975-1939; Fax: 306-975-1966; E-mail: gaba@lights.com; WWW: at <http://www.lights.com/gaba/index.html>

RICE GENOME RESEARCH IN TAIWAN

The rice genome research program in Taiwan began 2 years ago and focuses on those genes involved in embryo development. According to an article in the July 1995 newsletter, *Rice Genome*, progress has been made cloning and sequencing rice genes dealing with DNA regulation, metabolism, seed storage, late embryogenesis development, and cellular metabolism.

Seven laboratories collaborate in the research. The program coordinator is Dr. Wu Shinkan at Academia Sinica, Institute of Botany, Taipei, Nankang.

BST STILL BANNED IN EUROPE

The European Commission has extended its ban on the marketing of BST (bovine somatotropin) and its administration to dairy cows until December 31, 1999. Member states may, however, carry out limited practical tests on the use of BST, under official veterinary controls. For more details, please send a fax to A. Wilson at 32-2-295-3144.

BIOSAFETY RESEARCH IN SWITZERLAND

Two years ago, in Basel, Switzerland, the Biosafety Research and Assessment of Technology Impacts Organization (commonly called BATS) was started. Its goal is to evaluate scientific data and develop a database related to the effects of biotechnology. The intent of the evaluations is to develop "timely risk/benefit assessments of an evolving technology and for the implementation of adequate regulation," according to the June 1995 issue of *SCREEN Newsletter*, a Dutch/British publication.

The process includes assessing the impact of the technology from various perspectives including social, ethical, economic, and ecological points of view as well as from a biological safety standpoint. The database is international in scope and contains biosafety research projects, scientific literature, regulations, guidelines, international meeting reports, and technology impact assessment studies. To learn more about BATS, please write to BATS, Clarastrasse 13, Ch-4058, Basel, Switzerland.

REDBIO: SHARING THE FRUITS OF KNOWLEDGE

A symposium organized by the Food and Agriculture Organization of the United Nations and held in Luxembourg in 1989 recommended that biotechnology should be applied to developing countries to help solve problems in which conventional methodologies have had limited success. As a result of that meeting and others that followed, a technical

cooperation network was established among plant biotechnology laboratories in Latin America and the nations of the Caribbean. That network was called REDBIO.

Today, REDBIO consists of 359 public and private laboratories and institutions in 25 Latin American and Caribbean countries. REDBIO's activities include cooperative research projects among laboratories of the region, supporting the development of national policies, and promoting the exchange of research results and biological materials. Immediate goals include more training in molecular biology, genetic engineering, and the use of molecular markers in plant genetic improvement. To learn more about REDBIO, write to the Technical Secretariat, FAO Regional Office of Latin America and the Caribbean, P.O. Box 10095, Santiago, Chile; or send a fax to 56-2-696-1124; E-mail: J.IZQUIERDO@CGNET.COM

NEW PUBLICATIONS

- European Biotech '95: Gathering Momentum. The Industry Annual Report. Published by Ernst & Young International. 1995. To order, write to the publisher at 21 Conduit St., London, W1R 9TB, United Kingdom
- Food Biotechnology: Health & Harvest for our Times. Prepared by the International Food Information Council Foundation. To receive a free copy, send a self-addressed, stamped business-size envelope to Food Biotechnology Brochure, PO Box 1144 Rockville, MD 20850.
- "Food Biotechnology: A Roundtable on Public Issues" A 15-minute video prepared by IFIC. Ordering information may be obtained by writing to IFIC Foundation, 1100 Connecticut Ave., NW, Suite 430, Washington, DC 20036.
- "Prospects for the Genetic Manipulation of Dairy Cattle: Opportunities Beyond BST" by D. D. Jones, USDA/OAB, and M. K. Cordle USDA/OAB, retired. Article in *Biotechnology Advances*, Vol. 13, No. 2. Published by Elsevier Science Ltd., UK, 1995. Reprints available by sending a request by fax to 202-720-5336.
- Three reports are available in English based on conferences held in Germany. The reports cover biosafety, horizontal gene transfer, and viral vectors for gene therapy. Please call 49-228-59-3652 or send a fax to 49-228-59-3601.
- *Bacillus thuringiensis* Biotechnology and Environmental Benefits, Vol. 1. Book comprised of papers presented on this subject at the Pacific Rim Conference in October 1994. Fax orders to Hua Shiang Yuan Publishing Co. at 886-2-6601010.

■ "Transgenic Virus-Resistant Plants and New Plant Viruses." Proceedings of a workshop sponsored by USDA's APHIS April 21-22, 1995. To receive a copy, please call 202-628-1500.

UPCOMING MEETINGS

Oct. 16-20: North American Plant Protection Organization Annual Meeting. Saskatoon, Saskatchewan, Canada. Sponsored by Agriculture and Agri-Food Canada. For details, please call 613-952-8000; Fax: 613-943-2482.

Oct. 16-20: Biotechnology Colloquium. Saskatoon, Saskatchewan, Canada. The colloquium is part of the North American Plant Protection Organization Annual Meeting. Sponsors include Agriculture and Agri-Food Canada and Ag-West Biotech Inc. For more details please call Jane Thibert at 613-952-8000; Fax: 613-952-0809.

Oct. 17: "Safety of Transgenic Crops: Environmental and Agricultural Considerations." Basel, Switzerland. Meeting organized by the Basel Forum on Biosafety. For details, please call 41-61-6909312; E-mail: kaeppli@ubaclu.unibas.ch

Oct. 22-25: International Symposium on Swine in Biomedical Research. College Park, MD. Sponsored by the University of Minnesota. For details, please send a fax to 612-624-7284 or send an e-mail message to pigmodel@gold.tc.umn.edu

Oct. 23-25: BioWest '95. San Francisco, CA. Sponsored by BioConferences International Inc. Call 301-652-3072; Fax: 301-652-4951.

Oct. 25-28: "Louis Pasteur and Industry in the 21st Century." Marnes-la-Coquette, France. For details please write to Institut Pasteur, Anne Bellod, 28 rue de Dr Roux, 75724, Paris Cedex 15; or call 33-1-4061-3380; Fax: 33-1-4061-3381.

Nov. 9-10: "Biotechnology at 1890 Institutions: A Symposium." Tallahassee, FL. Sponsored by Florida A&M University's College of Engineering Sciences. For details call Mehboob B. Sheikh at 904-561-2219.

Nov. 13-15: Pacific Rim University/Industry Technology Transfer Conference. Los Angeles, CA. Sponsored by Technology Transfer Conferences Inc. For details, please call 615-366-0679; Fax: 615-366-0695.

Nov. 13-18: Biotecnologia Habana '95. Havana, Cuba. For details, please write to Biotecnologia Habana '95, P.O. Box 6162, Havana 10600, Ave. 31 entre 158 y 190, Cubanacan, Cuba; E-mail: biot95@ingen.cigb.edu.cu

Nov. 30-Dec. 1: Exploiting Transgenic Technology for Commercial Development. San Diego, CA. Sponsored by International Business Communications. For more details, please call 508-481-6400.

Dec. 17-22: "Biotechnology of Foods and Flavors." A symposium at the PACIFICHEM '95 Congress. Honolulu, Hawaii. Registration information is in Chemical Engineering News, July 10, 1995.

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Jan. 14-18: The International Plant Genome IV Conference. San Diego, CA. For details, please call 212-643-1750; Fax: 212-643-1758; E-mail: Scherago@Biotechnet.Com

Jan. 15-18: BioEast '96. Washington, DC. Sponsored by Genetic Engineering News and the International Society for the Advancement of Biotechnology. For details, please send a fax to 301-652-4951.

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Biotechnology Notes is prepared by Marti Asner, OAB/CSREES/USDA. Any comments or suggestions may be sent to USDA/OAB, Ag Box 0904, Room 3868-South, 14th and Independence Ave., S.W., Washington, DC 20250-0904. Telephone: 202-720-8742; Fax: 202-720-5336; E-mail: [masner@reeusda.gov](mailto:masner@reeusda.gov)

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